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| 10/783,779      | 02/20/2004  | Yu Gong              | 50277-2334          | 6676             |

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| EXAMINER |
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HARPER, LEON JONATHAN

|          |              |
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| ART UNIT | PAPER NUMBER |
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2166

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 03/22/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                                      |                                 |  |
|------------------------------|--------------------------------------|---------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/783,779 | <b>Applicant(s)</b><br>GONG, YU |  |
|                              | <b>Examiner</b><br>Leon J. Harper    | <b>Art Unit</b><br>2166         |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 January 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 and 45-77 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37 and 45-77 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/19/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

1. The amendment filed 1/8/2007 has been entered. Claims 1,18,36-37, and 45-70 have been amended. Claims 38-44 have been cancelled and claims 71-77 have been added. Accordingly, claims 1-37 and 39-77 are pending in this office action.

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 36,37,39-70 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. All of the claims 36-70 are directed to computer-readable mediums carrying instructions however the specification paragraph 0075 states that medium may take many form including transmission media. Paragraph 0075 then states that transmission media may be acoustic or light waves, radio wave and infra-red. Such mediums are incapable of storing instructions and therefore are incapable of being able to realize the functionality of the instructions and therefore lack a useful concrete and tangible result.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5890167 (hereinafter Bridge) in view of US 20040034615 (hereinafter Thom).

As for claim 1 Bridge discloses: analyzing metadata that describes one or more items (See column 3 lines 51-55), the data for which is in a source database (See column 3 lines 47-50), wherein the metadata for the database object is stored outside of the source database and the target database (See column 8 lines 42-45 note: there are the databases and the data dictionary); wherein data for said one or more items resides in a data file associated with said source database (See column 6 lines 40-44); performing the following in a single atomic operation; incorporating the data for said one or more items into the target database by providing said target database access to an incorporated data file (See column 6 lines 43-45), wherein said incorporated data file is

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said data file or a copy thereof (See column 7 lines 23-26); and incorporating the metadata for said one or more items into the target database (See column 7 lines 23-27). While Bride does not substantially differ from the claimed invention the disclosure of wherein the one or more items include at least one of a view, a sequence, a dimension, a cube, an ETL mapping, a queue, an external table, a stored procedure, and a database object is not necessarily explicit. Thom however does explicitly disclose wherein the one or more items include at least one of a view, a sequence, a dimension, a cube, an ETL mapping, a queue, an external table, a stored procedure, and a database object (See paragraph 0009). It would have been obvious to an artisan of ordinary skill in the pertinent art to have incorporated the teaching of Thom into the system of Bridge. The modification would have been obvious because users want to have the ability to extract and translate databases from one form to another (See Thom paragraph 0011).

As for claim 2 the rejection of claim 1 is incorporated, and further Thom discloses: wherein said one or more items include one or more database views from the source database, and the step of analyzing metadata that describes one or more items, the data for which is in a source database comprises the step of analyzing metadata that describes said one or more database views (See paragraph 0009).

As for claim 3 the rejection of claim 1 is incorporated, and further Bridge discloses: wherein said one or more items include one or more database sequences

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from the source database (See column 3 lines 50-55), and the step of analyzing metadata that describes one or more items, the data for which is in a source database comprises the step of analyzing metadata that describes said one or more database sequences (See column 3 lines 51-55 note: dictionary contains sequence information).

As for claim 4 the rejection of claim 1 is incorporated, and further Thom discloses: wherein said one or more items include one or more database dimensions from the source database (See paragraph 0046), and the step of analyzing metadata that describes one or more items, the data for which is in a source database comprises the step of analyzing metadata that describes said one or more database dimensions (See paragraph 0107).

As for claim 5 the rejection of claim 1 is incorporated, and further Thom discloses: wherein said one or more items include one or more database cubes from the source database (See paragraph 0046), and the step of analyzing metadata that describes one or more items, the data for which is in a source database comprises the step of analyzing metadata that describes said one or more database cubes (See paragraph 0095).

As for claim 6 the rejection of claim 1 is incorporated, and further Thom discloses: wherein said one or more items include one or more ETL mappings from the source database, and the step of analyzing metadata that describes one or more items,

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the data for which is in a source database comprises the step of analyzing metadata that describes said one or more ETL mappings (See paragraph 0416).

As for claim 7 the rejection of claim 1 is incorporated, and further Bridge discloses: wherein said one or more items include one or more queues from the source database (See column 3 lines 50-55), and the step of analyzing metadata that describes one or more items, the data for which is in a source database comprises the step of analyzing metadata that describes said one or more queues (See column 9 lines 30-40).

As for claim 8 the rejection of claim 1 is incorporated, and further Bridge discloses: wherein said one or more items include one or more external tables from the source database (See column 6 lines 46-50), and the step of analyzing metadata that describes one or more items, the data for which is in a source database comprises the step of analyzing metadata that describes said one or more external tables (See column 7 lines 30-35).

As for claim 9 the rejection of claim 1 is incorporated, and further Bridge discloses: wherein said one or more items include one or more stored procedures from the source database (See column 3 lines 50-55), and the step of analyzing metadata that describes one or more items, the data for which is in a source database comprises the step of analyzing metadata that describes said one or more stored procedures (See column 7 lines 5-10 note: there inherently must be some stored procedures to

accomplish the table-space method of transformation).

As for claim 10 the rejection of claim 1 is incorporated, and further Bridge discloses: wherein said one or more items include one or more database objects from the source database (See column 3 lines 50-55), wherein the metadata for the one or more database objects is stored outside of the source database and the target database (See column 6 lines 50-52 note: metadata is also in dictionary which is outside the file), and the step of analyzing metadata that describes one or more items, the data for which is in a source database comprises the step of analyzing metadata that describes said one or more database objects (See column 7 lines 33-37).

As for claim 11 the rejection of claim 1 is incorporated, and further Thom discloses: wherein the target database stores data in a data files that have a first format, the incorporated data file is in a second format that is different from the first format, and wherein a database server that manages the target database accesses the one or more items from said incorporated data file (See paragraphs 0051,0064).

As for claim 12 the rejection of claim 1 is incorporated, and further Thom discloses: wherein a source database server manages data from said source database, a target database server manages data from said target database (See paragraph 0054), and the step of analyzing metadata that describes one or more items, the data for which is in a source database is performed at least in part by a process that is



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separate from said source database server and said target database server (See paragraph 0058).

As for claim 13 the rejection of claim 1 is incorporated, and further Bridge discloses: wherein at least a portion of said metadata is read from a source repository separate from said source database (See column 2 lines 5-10).

As for claim 14 the rejection of claim 13 is incorporated, and further Thom discloses: wherein a source database server manages data from said source database, a target database server manages data from said target database (See paragraph 0054), and said source repository is a repository associated with an application separate from both said source database server and said target database server (See paragraph 0011 note: OLAP is designed to work with different applications).

As for claim 15 the rejection of claim 14 is incorporated, and further Thom discloses: wherein said application is an extraction, transformation and loading application (See paragraph 0057).

As for claim 16 the rejection of claim 1 is incorporated, and further Thom discloses: the step of analyzing is performed by one or more processes and the method further comprises the step of the one or more processes obtaining over a network said metadata that describes said one or more items from said source database (See

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paragraph 0054).

As for claim 17 the rejection of claim 1 is incorporated, and further discloses: wherein the step of analyzing is performed by one or more processes and the method further comprises said one or more processes reading at least a portion of the metadata from a machine-readable medium while said machine-readable medium resides at a first location, wherein the metadata about said items was recorded to the machine-readable medium at a second location See column 6 lines 50-52 note: metadata in dictionary is in a separate location).

Claims 18-33 are method for exporting database data claims substantially corresponding to claims 1-16 respectively, and are thus rejected for the same reasons as set forth in the rejection of claims 1-16.

As for claim 34, the rejection of claim 33 is incorporated and further Thom discloses: wherein the step of sending over a network further comprising the step of sending the metadata using the file transfer protocol (See paragraph 0054).

As for claim 35, the rejection of claim 18 is incorporated, and further Bridge discloses: wherein the step of extracting is performed by one or more processes and the method further comprises said one or more processes writing to a machine-readable medium said metadata that describes said one or more items from the source

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database (See column 6 lines 45-51 note: each table-space and a file is a separate process).

Claims 36,37 are computer-readable medium claims corresponding to the methods of claims 1 and 2 respectively and are thus rejected for the same reasons as set forth in the rejection of claims 1 and 2.

Claims 45-52 are computer readable medium claims corresponding to the method of claims 10-17 respectively and are thus rejected for the same reasons as set forth in the rejection of claims 10-17.

Claims 53-70 are computer-readable medium claims corresponding to the methods of claims 18-35 respectively and are thus rejected for the same reasons as set forth in the rejection of claims 18-35.

As for claim 71 the method of claim 18 is incorporated, and further Bridge discloses: wherein analyzing the extracted metadata for dependencies comprises analyzing the extracted metadata for dangling references (See column 10 lines 32-42).

As for claim 72 the method of claim 18 is incorporated, and further Thom discloses: wherein analyzing the extracted metadata for dependencies comprises analyzing the extracted metadata to ensure proper loading into the target database (See paragraph 0057).

As for claim 73 the method of claim 18 is incorporated, and further Thom discloses: removing a portion of the extracted metadata from the module in response to analyzing the extracted metadata for dependencies (See paragraph 0036 and 0057 note the rules).

As for claim 74 the method of claim 18 is incorporated, and further Thom discloses: creating meta-metadata to represent the module (See paragraphs 0057-0058 note: meta-metadata is just another name for metadata).

As for claim 75 the method of claim 74 is incorporated, and further Bridge discloses: providing the meta-metadata to the target database (See column 7 lines 33-37).

As for claim 76 the method of claim 75 is incorporated, and further Thom discloses the target database loading the metadata and data for said one or more items based on the meta-metadata (See paragraph 0057 note: meta-metadata is just another name for metadata).

As for claim 77 the method of claim 18 is incorporated, and further Bridge discloses: incorporating the extracted metadata and the data for said one or more items into the target database (See column 7 lines 23-27).

***Response to Arguments***

Applicant's arguments filed 1/8/2007 have been fully considered but they are not persuasive.

**Applicant argues:**

Nether Bridge nor Thomson alone or in combination, teach or suggest "analyzing the extracted metadata for dependencies," as claimed.

**Examiner responds:**

Examiner is not persuaded. During patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969). In this case Bridge discloses exporting and analyzing metadata (See column 3 lines 51-55). This metadata contains information about referential integrity constraints (See column 9 lines 62-65). Referential integrity constraint information is just another name for dependency information, when metadata contains a reference to objects in a database, tablespace etc. the metadata is dependant on the information is references (points to).

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon J. Harper whose telephone number is 571-272-0759. The examiner can normally be reached on 7:30AM - 4:00Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LJH  
Leon J. Harper  
March 16, 2007

  
Mohammad Ali,  
Primary Examiner